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I. Notes on the Indo-Australian Papilionida. By Percy I. Lathy, F.Z.S., F.E.S.

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#### PLATE I.

I HAVE recently been obliged to re-arrange the collection of Indo-Australian *Pupilionidæ* belonging to Mr. Herbert J. Adams, F.E.S., owing to the acquisition of a very large amount of material from the Van de Poll collections. In the course of this work I came across many interesting facts hitherto not known, in spite of the attention that has been paid to this group; the results are these notes.

Only two forms are described as new, viz. the Andaman race of *P. agamemnon*, Linn., and a form of *P. stratoeles*,

Feld., from Mindoro.

I am enabled to establish the claim of *T. brookiana*, Wall., from Sumatra to be considered as a distinct geographical form, while *P. cacharensis*, Butl., must sink as a synonym of *P. doubledayi*, Wall. I also describe nine hitherto unknown females and one male.

Troides eleanor, Walk.

The three females of this form of *Troides* from Sumatra are all devoid of subapical white markings and correspond TRANS. ENT. SOC. LOND. 1907.—PART I. (JUNE) 1

to the form recorded by Rothschild (Nov. Zool. vol. ii, p. 199) as ab. eleanor, Walk.; the locality of this aberration is unknown, but I think there is little doubt that this is the usual Sumatran form, therefore Walker's name must be applied to the sub-species. It is curious that Malacca specimens = albescens, Rothsch., should be much whiter than the Bornean examples and that the Sumatran females which one would have expected to be intermediate are so different.

Troides darsius, Gray.

An aberration of the male which has a black spot in each of discal yellow markings of hind-wing excepting post-cellular one.

Troides papuensis, Wall.

A remarkable aberration of the male which has a dirty white marginal border to fore-wing below.

One example from Stephansort, German New Guinea.

Troides dohertyi, Ripp.

A specimen of the male from Talaut which has distinct golden scaling on disc of hind-wing above; the discal yellow markings below rather more extended than usual.

Troides neomiranda, Fruhs.

Q. Ground-colour darker than in the female of *T. mirunda*, Butl.; the upper adnervular whitish markings extending to cell and yellow markings of hind-wing larger; these differences apply to both upper and under surfaces of wings and on the under-side the marginal cream-coloured lunules are larger than in Butler's species.

2 ♀♀ from Sumatra.

Troides vistara, Fruhs.

- 3. Differs from the other forms of *T. amphrysus* in having the adnervular markings of fore-wing greyish-white instead of yellow; the marginal black border of hind-wing is as in *T. niasicus*, Fruhs.
  - 2 3 3 from Tanah Massa and Poelo Tello, Batu Isles.

Troides sumatranus, Hagen.

Q. The single female differs from the other forms of

amphrysus females in having the ray-like markings of the fore-wing yellow instead of dirty-white; the base of hind-wing is black, somewhat as in *T. vandepolli*, Snell.

Papilio palembanganus, Rothsch.

Mr. Adams has one male and three females; the male has one spot at apex of cell of hind-wing and has the upper submarginal spot; of the females one has one spot at apex of cell of hind-wing, the other two have no spot; they vary considerably in extent of white markings, in one of which they are greatly reduced; the submarginal spots are rather smaller and not so white as in Javan examples.

Papilio doubledayi, Wall.

A good series of specimens from Cachar, Malacca and Siam. I think cacharensis, Butl., must be treated merely as a synonym of this species. Two examples from Cachar sent in the same parcel as typical specimens are not to be distinguished from Malaccan forms; they have an even greater extent of white and none of the characteristics given by Rothschild to separate the two forms.

Papilio fehri, Honr.

An aberration of the male from Orahili, Nias, in which the red spots of hind-wing have almost entirely disappeared, being represented by a few reddish scales.

Papilio saturnus, Guér.

A curious aberration from Sumatra resembles *P. tellonus*, Fruhs., from the Batu Isles, in having an additional patch on hind-wing, in other respects however it agrees with the usual Sumatran form.

Papilio memnon, Linn.

A remarkable aberration of the male from Mt. Marapok, British North Borneo, in which the basal red spot of hind-wings below is much enlarged and suffused; the diseal row of black spots strongly suffused with reddish scales; the submarginal row of black spots reduced.

Papilio memnon, Linn.

Among some of the more noticeable forms of females are ab. achates, Cram., with basal patch of fore-wing white, and

another with basal patch orange; specimens from Banka with anal angle of fore-wing white and outer-margin also to near apex; an example from Nias with basal white patch of fore-wing suffused with reddish scales.

Papilio rumanzovius, Esch.

I am able to record a single female of the form semperinus, Haase, from Talaut. The band parallel to abdominal margin of hind-wing is pinkish-white, not scarlet.

Papilio acheron, Gr. Sm. (Plate I, fig. 2.)

A female from Mt. Kinabalus, British North Borneo, which appears to differ from the female described by Rothschild, Nov. Zool, vol. iii, p 65, 1896, in having a subapical white band on fore-wing above and below.

Papilio alphcios, Fruhs.

Fruhstorfer, in Iris, 1901, p. 343, gives this name to a female of the polytes group from Menado; Mr. Adams also has a female from the same locality. I think these  $\mathcal{L}$  belong to the tailless  $\mathcal{L}$  and are the Celebes form of polytes, Linn., and that alcindor, Oberthur, should be kept as a distinct species.

Papilio hewitsoni, Westw.

2. Does not differ in any respect from the male. Four examples from Mt. Kinabalu, British North Borneo.

Papilio telesicles, Feld.

Among a long series of females of this variable species I find two interesting forms, one which agrees with ableucothoides, Honr., but has a strong purple gloss on anterior of fore-wings, this specimen unfortunately is without locality; the other is brown as in ab. nepticula, Rothsch., but fore-wings entirely without white markings and having a submarginal row of yellowish-brown spots; this form was obtained on Mt. Marapok, British North Borneo. From Sumatra Mr. Adams has two forms of female, one belonging to ab. daja, Rothsch, and the other to ab. nepticula, Rothsch.

Papilio ægialus, Dist. (Plate I, fig. 1.)

Q. Upper-side. Fore-wing olive-brown darker on outer-margin; the following white markings, a large patch at apex of cell extending

beyond cell nearly to costa, three small discal patches, fascia on innermargin, and a row of nine submarginal spots. Hind-wing dark brown, a large white patch almost filling cell and seven patches around cell of which the middle ones are short, a series of seven submarginal lunules, white spots, and a similar number of marginal white spots between nervules.

Under-side similar but paler and white markings more extended.

A single example from the Batu Islands; it may easily be distinguished from the same sex of *P. mendax*, Rothsch., by greater extent of white markings and absence of purple gloss.

Papilio brunei, Fruhs.

2. Differs from the male in the same way as evan, Doubld., differs. The black markings of hind-wing are less than in the mainland form and the silvery markings of the hind-wing below are most distinct.

Six examples from Mt. Marapok, British North Borneo.

Papilio insularis, Stgr.

2. Similar to male but slightly larger. A single specimen from Sumatra.

Papilio eclebensis, Fick.

A single female from Talaut which apparently belongs to this form.

Papilio sarpedon, Linn.

A single specimen of the remarkable melanistic form figured by de Niceville, Journ. Bombay N. H. Soc., p. 54; n. 14, t. 4, p. 11. This was also obtained in Sumatra.

An aberration of the male from Java has a green spot at apex of cell of fore-wing.

Papilio milon, Feld.

An aberration of the male from Tondano, Celebes, with a submarginal row of indistinct green lunules on fore-wing above.

Papilio andamana, sub-sp. nov.

Differs from *P. agamemnon*, Linn., in the markings being bluishgreen instead of yellowish-green; from the allied *P. decoratus*, Rothsch., from Nicobars, it may be separated by less amount of red markings on hind-wings below.

Seven males from the Andaman Isles.

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Papilio macaristus, Gr. Sm.

2. Similar to the male, but larger and the outer margin of fore-wing more rounded.

A single example from Mt. Kinabalu, British North

Borneo.

Papilio xanthosoma, Stgr.

2. Similar to the male but larger and the outer margin of fore-wing more rounded.

Two specimens from Sumatra.

Papilio stratoclides, sub-sp. nov. (Plate I, fig. 3.)

Similar to *P. stratocles*, Feld., but whitish markings of both wings above and below very much more extended, this being especially so in the discal markings of the hind-wings.

Hab. Mindoro.

I find that the firm of Staudinger and Bang-Haas have been sending out this sub-species as typical stratocles, Feld., and the true stratocles, Feld., as stratoclides, therefore the two forms are probably confused in many collections; the description of stratoclides was never published, this being the case in many of the names in Staudinger's list.

EXPLANATION OF PLATE I.

[See Explanation facing the Plate.]